Check List the journal of biodiversity data

NOTES ON GEOGRAPHIC DISTRIBUTION

Check List 12(5): 1979, 12 October 2016 doi: http://dx.doi.org/10.15560/12.5.1979
ISSN 1809-127X

Rediscovery of *Antilopsocus nadleri* Gurney, 1965 (Psocodea, Troctomorpha, Pachytroctidae) in South America

Alfonso Neri García-Aldrete[1], **Ranulfo González**[2], **Anderson Arenas-Clavijo**[2*] and **Rodrigo Lopes-Ferreira**[3]

1 Universidad Nacional Autónoma de México, Instituto de Biología, Departamento de Zoología, Apartado Postal 70-153, México, DF, Mexico
2 Universidad del Valle, Facultad de Ciencias Naturales y Exactas, Departamento de Biología, Calle 13 # 100-00, Edf. 320. Santiago de Cali, Colombia
3 Centro de Estudos em Biologia Subterrânea. Departamento de Biologia. Universidade Federal de Lavras, Lavras, MG, Brazil
* Corresponding author. E-mail: anderson.arenas@correounivalle.edu.co

Abstract: We found 14 female specimens of *Antilopsocus nadleri* Gurney, 1965 in Distrito Federal and Minas Gerais, Brazil and in Cauca, Colombia, far from Trinidad and Tobago and Mato Grosso do Sul, Brazil, where the species was previously known. *Antilopsocus nadleri* had not been collected since 1968.

Key words: Neotropics; Psocoptera; South America; taxonomy

Projections of the head capsule are uncommon in psocids. Examples include species of *Steleops* Enderlein, 1910, having pedunculate eyes (González Obando et al. 2011), as well as species of *Manicapsocus* Smithers, 1966 and *Peritroctes* Ribaga, 1911, which show horn-like projections next to the compound eyes (Menon 1938; Thornton and Wong 1966; Badonnel 1983; Yoshizawa 2016). *Antilopsocus nadleri* Gurney (1965) is a striking psocid that presents well-developed horns on the vertex, next to the compound eyes.

This species was described on the basis of two specimens from Trinidad and Tobago, collected in soil litter in a cacao plot at the Imperial College of Tropical Agriculture (now University of the West Indies, St. Augustine), in 1943–1944, and one specimen from Campo Grande, Mato Grosso, Brazil, taken in 1959 by beating scrub vegetation and sugar cane (Gurney 1965). In 1968, New (1973) identified additional specimens collected from leaf litter, about 260 km north of Xavantina, Mato Grosso; the location of these specimens is unknown.

We collected one female each from Distrito Federal and Minas Gerais, Brazil. Both specimens are deposited in the Centro de Estudos em Biologia Subterrânea, Universidade Federal de Lavras, Lavras, Minas Gerais, Brazil; catalog numbers ISLA 5911 and ISLA 11421. We also collected from leaf litter using pitfall traps 12 female specimens in Cauca, Colombia, in El Rosal village, Caldono town. Our Colombian specimens are deposited in the Entomology Museum of the Universidad del Valle, Santiago de Cali, Colombia (MUSENUV); catalog numbers 27865 to 27876 (Figure 1; Table 1).

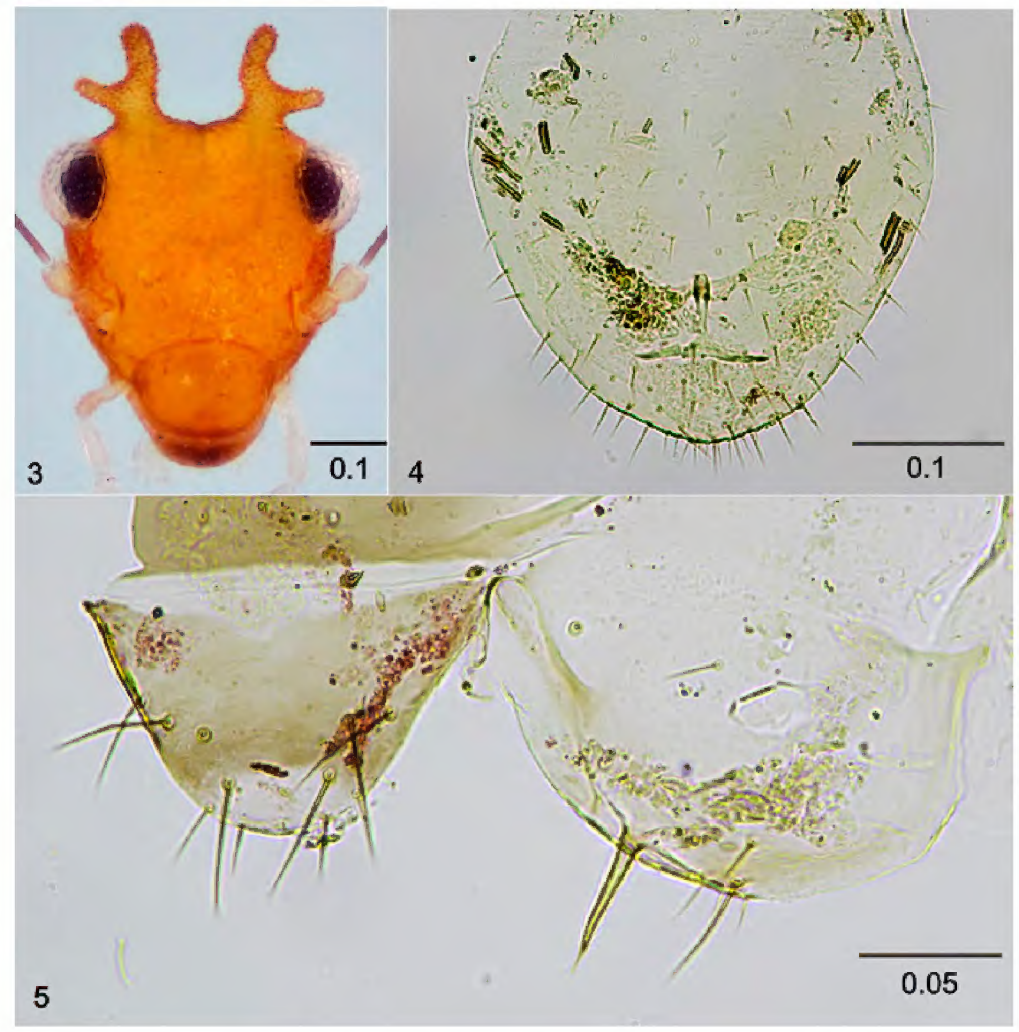
We dissected and mounted one of our Colombian specimens in Canada balsam, following standard procedures (Figures 2–5), for comparisons with the measurements provided by Gurney (1965). Measurements of all specimens

Figure 1. Map of South America showing the distribution of *Antilopsocus nadleri* Gurney, 1965. Circles correspond to previous records (Gurney 1965; New 1973), and diamonds correspond to new records.

Table 1. Geographic coordinates of records of *Antilopsocus nadleri* Gurney.

Locality	Coordinates	Altitude (m)	Habitat	Number of specimens	Collection date
Trinidad and Tobago (Gurney 1965)	10°38′31.12″ N, 061°24′02.03″ W	ca. 46–80	Cacao plantation	2	1943–1944
Campo Grande (Brazil) (Gurney 1965)	20°30′18.54″ S, 054°36′48.85″ W	ca. 600	Scrub vegetation	1	1959
Mato Grosso (Brazil) (New 1973)	12°49′ S, 051°46′ W	400	Leaf litter	57	1968
Brazlândia, D. F. (Brazil)	15°36′31.35″ S, 048°06′53.41″ W	ca. 840	Cave	1	28.XI.2003
Nova Lima, Minas Gerais (Brazil)	19°58′53.30″ S, 043°53′26.02″ W	ca. 750	Cave	1	21.XI.2014
Cauca (Colombia)	02°51′39.7″ N, 076°33′50.5″ W	1438	Sun coffee plantation	1	20.XII.2015
Cauca (Colombia)	02°51′54.1″ N, 076°33′38.5″ W	1367	Shaded coffee plantation	1	6.VIII.2015
Cauca (Colombia)	02°51′45.4″ N, 076°33′56.5″ W	1437	Shaded coffee plantation	1	20.VIII.2015
Cauca (Colombia)	02°51′45.1″ N, 076°33′31.2″ W	1436	Shaded coffee plantation	2	22.XII.2015
Cauca (Colombia)	02°51′27.1″ N, 076°33′22.7″ W	1479	Shaded coffee plantation	1	6.I.2016
Cauca (Colombia)	02°51′44.1″ N, 076°33′47.6″ W	1404	Forest patch	4	24.XII.2015
Cauca (Colombia)	02°51′20.5″ N, 076°32′40.7″ W	1428	Forest patch	1	8.I.2016
Cauca (Colombia)	02°51′17.7″ N, 076°33′05.6″ W	1479	Forest patch	1	9.I.2016

Figure 2. Dorsal habitus of *Antilopsocus nadleri* (female from Colombia). Scale in mm.



Figures 3–5. *Antilopsocus nadleri* (female from Colombia). **3.** Head, frontal view. **4.** Subgenital plate. **5.** Epiproct and paraproct. Scales in mm.

were taken with a filar micrometer with a measuring unit of 53 μm (Table 2).

A comparison of the Brazilian and Colombian specimens to the illustrations and measurements in Gurney (1965), show that our material to be *A. nadleri*. Our new records demonstrate that this species is wide ranging (Figure 1), and these new records are remarkable because this species has not been collected in 35 years.

The Brazilian specimens were collected from a cave and a mine; the Colombian specimens were found in leaf litter, as was the holotype from Trinidad and Tobago. The specimen from Campo Grande, Mato Grosso do Sul, was found beating scrub vegetation and sugar cane (Gurney, 1965). It suggest that *A. nadleri* is adjusted to habitat series 3.1 *sensu* Mockford (1993): strict litter habitants. The male of this species still unknown, further captures and analyses are needed to unveil if South American populations are parthenogenetic.

ACKNOWLEDGEMENTS

ANGA thanks the Instituto de Biología, Universidad Nacional Autónoma de México, for its continuous research support. RGO and AAC thank the Departamento

Table 2. Measurements (in mm) of females of *Antilopsocus nadleri* Gurney, from five localities in South America

Character	Holotype (Trinidad and Tobago)	Campo Grande (Brazil)	Brazlândia, DF (Brazil)	Nova Lima (Brazil)	Cauca (Colombia)
Body length	1.50	1.45	1.50	1.45	1.45–1.75
Head length, from apex of horn to apex of labrum	0.65	0.56	0.64	0.60	0.50–0.58
Greatest head width across eyes	0.43	0.42	0.42	0.42	0.40–0.45
Interocular distance	0.23	0.23	0.25	0.26	0.23–0.26
Interocular distance at vertex	0.30	0.27	0.28	0.28	0.26–0.29
Antero-posterior diameter of right compound eye	0.13	0.13	0.12	0.14	0.11–0.15
Transverse diameter of right compound eye	0.10	0.10	0.08	0.08	0.07–0.10

de Biología, Facultad de Ciencias Naturales y Exactas, Universidad del Valle, Santiago de Cali, Colombia, for supporting their research. Authors thank the reviewers, who dedicated time to improve the quality of this paper.

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Author contributions: ANGA and RG identified our specimens of *A. nadleri* and wrote the manuscript. AA collected and measured the Colombian specimens, prepared the map, and formatted the manuscript. RLF collected and measured the Brazilian specimens.

Received: 24 May 2016
Accepted: 22 September 2016
Academic editor: Luiz Alexandre Campos